ENVIRONMENTAL MANAGEMENT STANDARDS

This document was prepared by:

Office of Career, Technical and Adult Education
Nevada Department of Education
755 N. Roop Street, Suite 201
Carson City, NV 89701

Adopted by the State Board of Education /
State Board for Career and Technical Education on
March 21, 2013

NEVADA STATE BOARD OF EDUCATION
NEVADA STATE BOARD FOR CAREER AND TECHNICAL EDUCATION

CTE MISSION STATEMENT:

The Office of Career, Technical and Adult Education is dedicated to developing innovative educational opportunities for students to acquire skills for productive employment and lifelong learning.

NEVADA DEPARTMENT OF EDUCATION

TABLE OF CONTENTS

ACKNOWLEDGEMENTS

The development of Nevada Career and Technical standards and assessments is a collaborative effort sponsored by the Office of Career, Technical and Adult Education at the Department of Education and the Career and Technical Education Consortium of States. The Department of Education relies on teachers and industry representatives who have the technical expertise and teaching experience to develop standards and performance indicators that truly measure student skill attainment. Most important, however, is recognition of the time, expertise and great diligence provided by the writing team members in developing the Career and Technical Standards for Environmental Management.

STANDARDS DEVELOPMENT MEMBERS

Jeff Gromny, Instructor
West Career and Technical Academy, Las Vegas

Chance Crain, Instructor
Wells High School, Wells

Donald Noorda, Instructor
Wells High School, Wells

Tamra Herschbach, Instructor
Sandy Valley High School, Sandy Valley

Sheri McMahon, Environmental Officer
City of Las Vegas

Lewis Wallenmeyer, Director
Department of Air Quality, Clark County

Laura Doughty, Instructor
West Career and Technical Academy, Las Vegas

BUSINESS AND INDUSTRY VALIDATION

All CTE standards developed through the Nevada Department of Education are validated by business and industry through one or more of the following processes: (1) the standards are developed by a team consisting of business and industry representatives; or (2) a separate review panel was coordinated with industry experts to ensure the standards include the proper content; or (3) the adoption of nationally-recognized standards endorsed by business and industry.

The Environmental Management standards were validated through the active participation by business and industry on the development team and through a complete review by an industry panel.

PROJECT COORDINATOR

Sue Poland, Education Programs Professional
Agriculture Education
Office of Career, Technical and Adult Education
Nevada Department of Education

AGRICULTURE AND NATURAL RESOURCES
Program Requirements

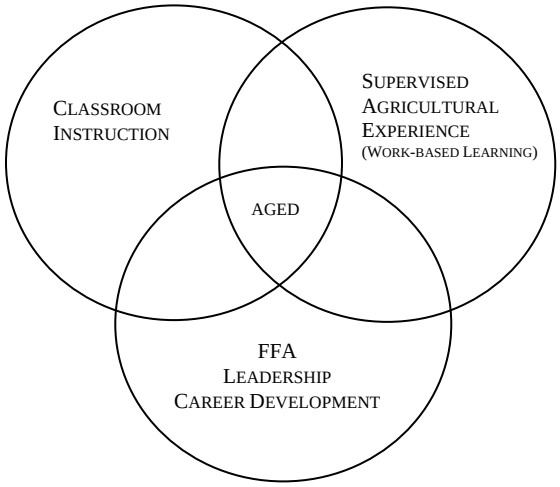
Occupations associated with agriculture production, natural resources, processing and distribution of food and fiber are important to the national interests and provide significant employment opportunities. Occupational education and training in agriculture and agri-business are essential to the continued economic health of Nevada and the nation, as it provides the needed competent and trained work force.

Agriculture education provides high school students with technical and specialized knowledge in production agriculture and natural resources as well as other specific agriculture occupations. The programs are designed to meet students' occupational objectives, interests, and abilities for entry into chosen occupations and can prepare them for advanced education and training. Agriculture education is a coordinated program of group and individual instructional activities consisting of classroom instruction, laboratory experiences, and leadership development. Integral to these activities are FFA (leadership development) and Supervised Agricultural Experience (work-based learning), Nevada Revised Statute 385.110. Federal/Public law#105-225 which was passed in August, 1998, states "Congress of the United States recognizes the importance of the FFA as an integral part of the program of Vocational Agriculture." All students enrolled in Agriculture Education will be recognized as members of the FFA organization. All secondary agriculture education programs and school districts will purchase a curriculum packet consisting of the New Horizons agriculture career and technical magazine, the FFA manual, and the Nevada Record Book on a yearly basis for every student enrolled in agriculture education in their program. Areas of study at the secondary level are divided into Agriculture Science and Specialized Advanced Agriculture Career and Technical Areas.

Agriculture and Society, Plant and Soil Science, Agriculture Mechanical Engineering and Technology, Animal Science, Leadership/FFA, Agriculture Business, Sales, Marketing and Supervised Agriculture Experience, Natural Resources, and Employability are included in the Agriculture Science introduction division.

Instruction in business/specialized agriculture provides training in specific occupational skills, duties, and tasks, as determined by the business and industry needs. Specialized career and technical agriculture programs will include, but are not limited to, the following: ornamental horticulture, floriculture design, turf and landscape management, equine science and technology, forestry technology, wildlife management and enforcement, food science and processing, feedlot management, animal science, veterinary science, agriculture power systems, natural resources and reclamation, mining science and operations, nursery and greenhouse management, landscape architecture, irrigation and chemical management, lawn care and maintenance, and agriculture construction.

NEVADA
AGRICULTURE EDUCATION
Model of Instruction



INTRODUCTION

The standards in this document are designed to clearly state what the student should know and be able to do upon completion of an advanced high school Environmental Management program. These standards are designed for a three-credit course sequence that prepares the student for a technical assessment directly aligned to the standards.

These exit-level standards are designed for the student to complete all standards through their completion of a program of study. These standards are intended to guide curriculum objectives for a program of study.

The standards are organized as follows:

Content Standards are general statements that identify major areas of knowledge, understanding, and the skills students are expected to learn in key subject and career areas by the end of the program.

Performance Standards follow each content standard. Performance standards identify the more specific components of each content standard and define the expected abilities of students within each content standard.

Performance Indicators are very specific criteria statements for determining whether a student meets the performance standard. Performance indicators may also be used as learning outcomes, which teachers can identify as they plan their program learning objectives.

The crosswalk and alignment section of the document shows where the performance indicators support the English Language Arts and the Mathematics Common Core State Standards, and the Nevada State Science Standards. Where correlation with an academic standard exists, students in the Environmental Management program perform learning activities that support, either directly or indirectly, achievement of one or more Common Core State Standards.

All students are encouraged to participate in the career and technical student organization (CTSO) that relates to their program area. CTSOs are co-curricular national associations that directly enforce learning in the CTE classroom through curriculum resources, competitive events, and leadership development. CTSOs provide students the ability to apply academic and technical knowledge, develop communication and teamwork skills, and cultivate leadership skills to ensure college and career readiness.

The Employability Skills for Career Readiness identify the “soft skills” needed to be successful in all careers, and must be taught as an integrated component of all CTE course sequences. These standards are available in a separate document.

The **Standards Reference Code** is only used to identify or align performance indicators listed in the standards to daily lesson plans, curriculum documents, or national standards.

Program Name	Standards Reference Code
Environmental Management	EMGMT

Example: EMGMT.2.3.4

Standards	Content Standard	Performance Standard	Performance Indicator
Environmental Management	2	3	5

CONTENT STANDARD 1.0 : INVESTIGATE ECOLOGICAL CONCEPTS AND SCIENCE PRINCIPLES RELATED TO ENVIRONMENTAL SCIENCE	
PERFORMANCE STANDARD 1.1 : EXPLORE ECOLOGICAL PRINCIPLES	
1.1.1	Evaluate the different biogeochemical cycles (i.e., water, carbon, nitrogen, and phosphorus)
1.1.2	Investigate the first and second Laws of Energy
1.1.3	Interpret energy change through an ecosystem (i.e., the energy pyramid)
1.1.4	Describe the interdependence of organisms within an ecosystem
1.1.5	Investigate the processes associated with ecological succession
1.1.6	Analyze the impacts of change in biodiversity
1.1.7	Differentiate between renewable and nonrenewable natural resources
PERFORMANCE STANDARD 1.2 : EXPLORE ECOSYSTEMS	
1.2.1	Compare and contrast Nevada's ecosystems (i.e., high and low desert, alpine, forest, riparian, and wetlands)
1.2.2	Identify factors that differentiate ecosystem and biomes
1.2.3	Explore limiting factors within an ecosystem's population
PERFORMANCE STANDARD 1.3 : EXPLORE POPULATION ECOLOGY	
1.3.1	Analyze factors that affect population density and dispersion
1.3.2	Explain the effects and/or tradeoff of population growth
1.3.3	Investigate carrying capacity on environmental resources
1.3.4	Explain how species become endangered or extinct
1.3.5	Identify management practices used to help populations recover

CONTENT STANDARD 2.0 : EXPLORING SCIENTIFIC INVESTIGATION IN THE ENVIRONMENT	
PERFORMANCE STANDARD 2.1 : DESIGN AND CONDUCT SCIENTIFIC RESEARCH	
2.1.1	List the steps of the scientific method
2.1.2	Design and conduct a scientific investigation
2.1.3	Compare results of repeated experiments to determine accuracy and precision
PERFORMANCE STANDARD 2.2 : REPORT SCIENTIFIC RESEARCH	
2.2.1	Organize the major parts of a research report
2.2.2	Generate a research report to present data findings and analyses with technical resources
2.2.3	Illustrate how to include proper tables and figures in a research report to support an argument
PERFORMANCE STANDARD 2.3 : UNDERSTAND SCIENTIFIC MEASUREMENT	
2.3.1	Describe the systems of measurement used in this country
2.3.2	Determine the metric prefixes and units used for measuring length, volume, weight, temperature, and area
2.3.3	Convert from one system of units to another system of units
PERFORMANCE STANDARD 2.4 : USE LABORATORY TOOLS AND EQUIPMENT	
2.4.1	Identify and properly use personal protection equipment (PPE)
2.4.2	Describe safety in science laboratories
2.4.3	Calibrate and use laboratory and field equipment and instruments according to standard operating procedures
2.4.4	Analyze and interpret results of sample measurements
2.4.5	Show the proper use and care of a microscope throughout a scientific investigation

CONTENT STANDARD 3.0 : EVALUATING ENVIRONMENTAL QUALITY	
PERFORMANCE STANDARD 3.1 : INVESTIGATE AIR QUALITY	
3.1.1	Identify components that make up the atmosphere
3.1.2	Identify types of air pollutants
3.1.3	Differentiate between point and nonpoint source pollution
3.1.4	Interpret the role of the atmosphere in creating the greenhouse effect
3.1.5	Explore interactions between meteorological processes and air quality
3.1.6	Investigate the role of modeling in predicting air quality
3.1.7	Explore interactions between climate processes and air quality
3.1.8	Investigate the cause and effects of acid rain produced through change in atmospheric composition
3.1.9	Collect and analyze air samples
3.1.10	Explore the effects of air pollution on humans, animals, and vegetation
PERFORMANCE STANDARD 3.2 : INVESTIGATE WATER QUALITY	
3.2.1	Identify the components of fresh and salt water
3.2.2	Identify types of water pollutants
3.2.3	Differentiate between point and nonpoint source pollution
3.2.4	Explore the effects of human activity on water quality
3.2.5	Explore interactions between climate processes and water quality
3.2.6	Explore interactions between water quality and aquatic ecosystems
3.2.7	Collect and analyze water samples
3.2.8	Explore effects of water pollution on humans, animals, and vegetation
PERFORMANCE STANDARD 3.3 : INVESTIGATE SOIL SCIENCE	
3.3.1	Explain the process of soil formation through weathering
3.3.2	Differentiate rock types and relate the composition of mineral matter in soils to parent material
3.3.3	Identify land uses, capability factors, and land capability classes
3.3.4	Perform a soil texture analysis
3.3.5	Explain how the physical qualities of the soil influence the infiltration and percolation of water
3.3.6	Describe the biodiversity found in soil
3.3.7	Relate the activities of microorganisms in soil to the environment
3.3.8	Examine the chemical and biological characteristics of soil
3.3.9	Conduct tests of soil to determine its use for environmental service systems
3.3.10	Collect and analyze a soil test

CONTENT STANDARD 4.0 : EXPLORING CONCEPTS OF SUSTAINABLE USE	
PERFORMANCE STANDARD 4.1 : INVESTIGATE SUSTAINABLE USE PRACTICES	
4.1.1	Define sustainable use
4.1.2	Recognize acceptable sustainable use practices
4.1.3	Identify sustainable agriculture practices
PERFORMANCE STANDARD 4.2 : COMPOSTING	
4.2.1	Define compost and composting
4.2.2	Explain scientific principles associated with composting, including heat transfer through microbial action
4.2.3	Evaluate methods of composting
PERFORMANCE STANDARD 4.3 : RECYCLING	
4.3.1	Explain the importance of recycling
4.3.2	Describe recycling methods
4.3.3	Identify materials that can be recycled
4.3.4	Evaluate local recycling programs and methods
PERFORMANCE STANDARD 4.4 : EXPLORE MINERAL EXTRACTION RESOURCES	
4.4.1	Identify local mineral resources
4.4.2	Summarize the importance of mineral resources to society
4.4.3	Compare the various practices for obtaining mineral resources
4.4.4	Evaluate the impact of mining practices on the environment
4.4.5	Compare processes for reclaiming areas where minerals have been extracted
PERFORMANCE STANDARD 4.5 : EXPLORE HYDROPONICS	
4.5.1	Compare and contrast common hydroponic systems
4.5.2	Identify the sustainable benefits of hydroponic production
4.5.3	Design a hydroponic system

CONTENT STANDARD 5.0 : USING GIS AND GPS	
PERFORMANCE STANDARD 5.1 : UNDERSTAND THE OPERATION OF A GPS	
5.1.1	Describe the purpose and function of a GPS
5.1.2	Demonstrate the ability to use a GPS unit, including waypoints, distance, and calibration
5.1.3	Explain how a GPS unit acquires its signals to define a location
PERFORMANCE STANDARD 5.2 : USE GEOSPATIAL ANALYSIS SOFTWARE	
5.2.1	Investigate Google Earth functions for geospatial analysis
5.2.2	Use other GIS software (i.e., ArcMap) for geospatial analysis and presentations
5.2.3	Create a geospatial database and a map image
PERFORMANCE STANDARD 5.3 : EXPLORE REMOTE SENSING	
5.3.1	Explain the function of remote sensing
5.3.2	Analyze applications for remote sensing

CONTENT STANDARD 6.0 : EXPLORE ENERGY SOURCES	
PERFORMANCE STANDARD 6.1 : INVESTIGATE CONVENTIONAL FUELS	
6.1.1	Identify conventional energy sources
6.1.2	Compare and contrast conventional energy sources
6.1.3	Evaluate the impact the burning of fossil fuels has on the environment
6.1.4	List measures to reduce energy consumption and explain how that may impact the environment
PERFORMANCE STANDARD 6.2 : INVESTIGATE ALTERNATIVE ENERGY RESOURCES	
6.2.1	Identify renewable energy sources (i.e., solar, wind, hydropower, and cogeneration)
6.2.2	Compare and contrast alternative energy sources
6.2.3	Evaluate the impact of alternative energy sources on the environment
6.2.4	Research the advantages and disadvantages of nuclear power production
6.2.5	Summarize the process of nuclear power generation

CONTENT STANDARD 7.0 : HYDROLOGY AND HYDROGEOLOGY	
PERFORMANCE STANDARD 7.1 : EXPLORE HYDROLOGY PRINCIPLES	
7.1.1	Describe the world's surface water supplies
7.1.2	Discuss the factors that influence the velocity of water through an open channel
7.1.3	Explain how the velocity of water influences channel morphology and stream processes
PERFORMANCE STANDARD 7.2 : EXPLORE PRINCIPLES OF HYDROGEOLOGY	
7.2.1	Differentiate the role of ground water, aquifers, and surface water in the geochemical cycle
7.2.2	Describe interactions between groundwater and surface water, including Darcy's Law
7.2.3	Define groundwater potential
7.2.4	Identify environmental hazards associated with groundwater supplies
7.2.5	Describe precautions taken to prevent, and reduce contamination of groundwater supplies
7.2.6	Research the cause and effect of groundwater loss
PERFORMANCE STANDARD 7.3 : INVESTIGATE WATERSHEDS	
7.3.1	Identify properties of watersheds
7.3.2	Explain watershed management
7.3.3	Diagram local watersheds

CONTENT STANDARD 8.0 : ENVIRONMENTAL LAW AND PUBLIC POLICY	
PERFORMANCE STANDARD 8.1 : EXPLORE CURRENT ENVIRONMENTAL ISSUES	
8.1.1	Distinguish between the concepts of conservation and preservation of natural resources
8.1.2	Explore GMOs' role in food production and their impact on society and environment
8.1.3	Investigate endangered species issues and their impact on society and the environment
8.1.4	Analyze the effect of non-native and invasive species on the environment
8.1.5	Explore issues surrounding causes and effects of climate change
8.1.6	Explore issues with allocation of water rights
PERFORMANCE STANDARD 8.2 : UNDERSTAND THE PURPOSES OF MAJOR LAWS IMPACTING ENVIRONMENTAL SERVICES	
8.2.1	Explain requirements of the Clean Air Act
8.2.2	Discuss requirements of the Endangered Species Act
8.2.3	Explain requirements of the Clean Water Act
8.2.4	Explain requirements of the Nuclear Waste Policy Act
8.2.5	Explain requirements of the Safe Drinking Water Act
8.2.6	Explain requirements of the Resource Conservation Recovery Act
8.2.7	Discuss requirements of the National Environmental Policy Act
8.2.8	Explain the requirement of the National Historical Preservation Act of 1966
8.2.9	Describe job-related activities subject to the Occupational Safety and Health Administration (OSHA)

CONTENT STANDARD 9.0 : ASSESS ENVIRONMENTAL SITE MANAGEMENT	
PERFORMANCE STANDARD 9.1 : EXPLORE HAZARDOUS MATERIALS MANAGEMENT SYSTEMS	
9.1.1	Identify types of hazardous materials
9.1.2	Describe risks associated with hazardous materials
9.1.3	Describe OSHA required safety practices in handling and disposal of hazardous materials
9.1.4	Respond to a mock hazardous material emergency situation
9.1.5	Interpret MSDS sheets
PERFORMANCE STANDARD 9.2 : EXPLORE INCINERATION SYSTEMS	
9.2.1	Explain the concepts associated with solid waste incineration
9.2.2	Describe the environmental impact of solid waste incineration
9.2.3	Evaluate methods of incinerating solid waste, including those used in waste to energy plants
PERFORMANCE STANDARD 9.3 : EXPLORE SANITARY LANDFILL SYSTEMS	
9.3.1	Define sanitary landfill
9.3.2	Explain basic sanitary landfill operating procedures and design
9.3.3	Evaluate sanitary landfill procedures
PERFORMANCE STANDARD 9.4 : EXPLORE SOLID WASTE MANAGEMENT SYSTEMS	
9.4.1	Differentiate between different types of solid waste
9.4.2	Evaluate environmental hazards created by different types of solid waste, solid waste accumulation, and solid waste disposal
9.4.3	Recognize the byproducts of solid waste treatment (i.e., leachate and methane)
9.4.4	Identify solid waste management issues in agricultural operations
PERFORMANCE STANDARD 9.5 : EXPLORE WASTE WATER TREATMENTS	
9.5.1	Define wastewater
9.5.2	Differentiate between wastewater treatment technologies
9.5.3	Discuss practical management options for waste water treatment byproducts
PERFORMANCE STANDARD 9.6 : EXPLORE PUBLIC DRINKING WATER TREATMENTS	
9.6.1	Examine the chemical and physical properties of drinking water
9.6.2	Define source water quality
9.6.3	Illustrate the steps in the public drinking water treatment process, highlighting the chemistry of the process
9.6.4	Demonstrate the use of water-testing instruments and equipment for public drinking water

CONTENT STANDARD 10.0 : EXPLORE CAREER OPPORTUNITIES IN ENVIRONMENTAL SYSTEMS	
PERFORMANCE STANDARD 10.1 : EXPLORE CAREERS IN ENVIRONMENTAL SYSTEMS	
10.1.1	Research potential careers in environmental science and management systems
10.1.2	Determine employability skills for a career in the environmental industry
10.1.3	Research additional industry certifications available

CONTENT STANDARD 11.0 : PARTICIPATE IN LEADERSHIP TRAINING THROUGH MEMBERSHIP IN FFA	
PERFORMANCE STANDARD 11.1 : RECOGNIZE THE TRAITS OF EFFECTIVE LEADERS AND PARTICIPATE IN LEADERSHIP TRAINING THROUGH INVOLVEMENT IN FFA	
11.1.1	Recognize opportunities in high-wage, high-skill careers in leadership and communications
11.1.2	Explain the FFA creed, motto, salute, and FFA Mission Statement
11.1.3	Demonstrate knowledge of the history of the organization, the chapter constitution and bylaws, and the chapter program of activities
11.1.4	Demonstrate knowledge of the FFA Code of Ethics, official dress, and the proper use of the FFA jacket
11.1.5	Describe the meaning of the FFA colors
PERFORMANCE STANDARD 11.2 : UNDERSTAND THE OPPORTUNITIES IN FFA	
11.2.1	Describe how FFA develops leadership skills, personal growth, and career success
11.2.2	Identify major state and national activities and awards available to FFA members
11.2.3	Participate in at least one Career Development Event at the local level
11.2.4	Expand leadership experience by serving as a chapter officer or on a committee
11.2.5	Exhibit leadership skills by demonstrating proper parliamentary procedure
PERFORMANCE STANDARD 11.3 : UNDERSTAND THE IMPORTANCE OF SCHOOL AND COMMUNITY AWARENESS	
11.3.1	Discuss the meaning and importance of community service
11.3.2	Identify and describe some community service organizations
11.3.3	Explain how FFA members can become involved in community improvement and development
11.3.4	Participate in a school improvement or community development project

CONTENT STANDARD 12.0 :	DESCRIBE THE RELATIONSHIP BETWEEN A SUPERVISED AGRICULTURAL EXPERIENCE (SAE) AND PREPARATION OF STUDENTS FOR A CAREER IN AGRICULTURE
PERFORMANCE STANDARD 12.1 :	**ACTIVELY DEVELOP AND PARTICIPATE IN A SUPERVISED AGRICULTURAL EXPERIENCE, WHICH ENABLES STUDENTS TO OBTAIN WORK-BASED SKILLS**
12.1.1	Identify and describe a career interest in an agriculture or agriculture-related occupation
12.1.2	Participate in and manage their individual Supervised Agricultural Experience
12.1.3	Keep accurate records as prescribed by the Nevada State FFA policies and procedures
PERFORMANCE STANDARD 12.2 :	**MAINTAIN A SUPERVISED AGRICULTURAL EXPERIENCE**
12.2.1	Accurately maintain SAE record books
12.2.2	Investigate the proficiency award areas related to their SAE program
12.2.3	Actively pursue necessary steps to receive higher degrees in FFA

CROSSWALK AND ALIGNMENTS OF ENVIRONMENTAL MANAGEMENT STANDARDS AND THE COMMON CORE STATE STANDARDS, THE NEVADA SCIENCE STANDARDS, AND THE COMMON CAREER TECHNICAL CORE STANDARDS

CROSSWALK (ACADEMIC STANDARDS)

The crosswalk of the Environmental Management Standards shows links to the Common Core State Standards for English Language Arts and Mathematics and the Nevada Science Standards. The crosswalk identifies the performance indicators in which the learning objectives in the Environmental Management program support academic learning. The performance indicators are grouped according to their content standard and are crosswalked to the English Language Arts and Mathematics Common Core State Standards and the Nevada Science Standards.

ALIGNMENTS (MATHEMATICAL PRACTICES)

In addition to correlation with the Common Core Mathematics Content Standards, many performance indicators support the Common Core Mathematical Practices. The following table illustrates the alignment of the Environmental Management Standards Performance Indicators and the Common Core Mathematical Practices. This alignment identifies the performance indicators in which the learning objectives in the Environmental Management program support academic learning.

CROSSWALK (COMMON CAREER TECHNICAL CORE)

The crosswalk of the Environmental Management Standards shows links to the Common Career Technical Core. The crosswalk identifies the performance indicators in which the learning objectives in the Environmental Management program support the Common Career Technical Core. The Common Career Technical Core defines what students should know and be able to do after completing instruction in a program of study. The Environmental Management Standards are crosswalked to the Agriculture, Food and Natural Resources Career Cluster™ and the Environmental Service Systems Career Pathway.

CROSSWALK OF ENVIRONMENTAL MANAGEMENT STANDARDS AND THE COMMON CORE STATE STANDARDS

CONTENT STANDARD 1.0: INVESTIGATE ECOLOGICAL CONCEPTS AND SCIENCE PRINCIPLES RELATED TO ENVIRONMENTAL SCIENCE

Performance Indicators	Common Core State Standards and Nevada Science Standards
1.1.1	**Science: Earth and Space** E.12.C.3 Students know elements exist in fixed amounts and move through solid earth, oceans, atmosphere and living things as part of biogeochemical cycles. **English Language Arts: Reading Standards for Literacy in Science and Technical Subjects** RST.11-12.9 Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.
1.1.2	**Science: Physical Science** P.12.A.6 Students know chemical reactions either release or absorb energy. **English Language Arts: Reading Standards for Literacy in Science and Technical Subjects** RST.11-12.8 Evaluate the hypotheses, data, analysis, and conclusions in a science or technical text, verifying the data when possible and corroborating or challenging conclusions with other sources of information. RST.11-12.9 Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.
1.1.3	**Science: Life Science** L.12.C.3 Students know the amount of living matter an environment can support is limited by the availability of matter, energy, and the ability of the ecosystem to recycle materials. **English Language Arts: Reading Standards for Literacy in Science and Technical Subjects** RST.11-12.9 Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.
1.1.4	**Science: Life Science** L.12.C.1 Students know relationships of organisms and their physical environment. **English Language Arts: Reading Standards for Literacy in Science and Technical Subjects** RST.11-12.9 Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.
1.1.5	**Science: Life Science** L.12.C.1 Students know relationships of organisms and their physical environment. **English Language Arts: Reading Standards for Literacy in Science and Technical Subjects** RST.11-12.7 Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem. RST.11-12.8 Evaluate the hypotheses, data, analysis, and conclusions in a science or technical text, verifying the data when possible and corroborating or challenging conclusions with other sources of information. RST.11-12.9 Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.

1.1.6	**Science: Life Science** L.12.C.2 Students know how changes in an ecosystem can affect biodiversity and biodiversity's contribution to an ecosystem's stability. **English Language Arts: Reading Standards for Literacy in Science and Technical Subjects** RST.11-12.9 Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.
1.1.7	**Science: Earth and Space** E.12.C.4 Students know processes of obtaining, using, and recycling of renewable and non-renewable resources. **English Language Arts: Reading Standards for Literacy in Science and Technical Subjects** RST.11-12.7 Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem.
1.2.1	**Science: Life Science** L.12.C.3 Students know the amount of living matter an environment can support is limited by the availability of matter, energy, and the ability of the ecosystem to recycle materials. **English Language Arts: Reading Standards for Literacy in Science and Technical Subjects** RST.11-12.9 Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible
1.22	**Science: Earth and Space** E.12.C.4 Students know processes of obtaining, using, and recycling of renewable and non-renewable resources. **English Language Arts: Reading Standards for Literacy in Science and Technical Subjects** RST.11-12.9 Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible
1.2.3	**English Language Arts: Reading Standards for Literacy in Science and Technical Subjects** RST.11-12.9 Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible
1.3.1	**Science: Life Science** L.12.C.1 Students know relationships of organisms and their physical environment. **English Language Arts: Reading Standards for Literacy in Science and Technical Subjects** RST.11-12.9 Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible
1.3.2	**Science: Life Science** L.12.C.2 Students know how changes in an ecosystem can affect biodiversity and biodiversity's contribution to an ecosystem's stability. **English Language Arts: Reading Standards for Literacy in Science and Technical Subjects** RST.11-12.9 Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible
1.3.3	**Science: Life Science** L.12.C.2 Students know how changes in an ecosystem can affect biodiversity and biodiversity's contribution to an ecosystem's stability. **English Language Arts: Reading Standards for Literacy in Science and Technical Subjects** RST.11-12.9 Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible

1.3.5	**English Language Arts: Reading Standards for Literacy in Science and Technical Subjects**	
	RST.11-12.9	Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible

CONTENT STANDARD 2.0: EXPLORING SCIENTIFIC INVESTIGATION IN THE ENVIRONMENT

Performance Indicators	Common Core State Standards and Nevada Science Standards
2.1.2	**Science: Nature of Science** N.12.A.1 Students know tables, charts, illustrations and graphs can be used in making arguments and claims in oral and written presentations. N.12.A.2 Students know scientists maintain a permanent record of procedures, data, analyses, decisions, and understandings of scientific investigations. N.12.A.3 Students know repeated experimentation allows for statistical analysis and unbiased conclusions. N.12.A.4 Students know how to safely conduct an original scientific investigation using the appropriate tools and technology. N.12.A.5 Students know models and modeling can be used to identify and predict cause-effect relationships. N.12.A.6 Students know organizational schema can be used to represent and describe relationships of sets.
2.1.3	**Science: Nature of Science** N.12.A.3 Students know repeated experimentation allows for statistical analysis and unbiased conclusions. **English Language Arts: Writing Standards for Literacy in Science and Technical Subjects** WHST.11-12.7 Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation.
2.2.1	**Science: Nature of Science** N.12.A.1 Students know tables, charts, illustrations and graphs can be used in making arguments and claims in oral and written presentations. N.12.A.2 Students know scientists maintain a permanent record of procedures, data, analyses, decisions, and understandings of scientific investigations. N.12.A.3 Students know repeated experimentation allows for statistical analysis and unbiased conclusions. N.12.A.5 Students know models and modeling can be used to identify and predict cause-effect relationships. N.12.A.6 Students know organizational schema can be used to represent and describe relationships of sets.

2.2.2	**Science: Nature of Science** N.12.A.1 Students know tables, charts, illustrations and graphs can be used in making arguments and claims in oral and written presentations. N.12.A.2 Students know scientists maintain a permanent record of procedures, data, analyses, decisions, and understandings of scientific investigations. N.12.A.3 Students know repeated experimentation allows for statistical analysis and unbiased conclusions. N.12.A.5 Students know models and modeling can be used to identify and predict cause-effect relationships. N.12.A.6 Students know organizational schema can be used to represent and describe relationships of sets. **English Language Arts: Writing Standards for Literacy in Science and Technical Subjects** WHST.9-10.7 Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation. WHST.9-10.8 Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the usefulness of each source in answering the research question; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and following a standard format for citation.
2.2.3	**Science: Nature of Science** N.12.A.1 Students know tables, charts, illustrations and graphs can be used in making arguments and claims in oral and written presentations. **English Language Arts: Writing Standards for Literacy in Science and Technical Subjects** WHST.11-12.7 Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation. WHST.11-12.8 Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the usefulness of each source in answering the research question; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and following a standard format for citation.
2.4.1	**Science: Nature of Science** N.12.A.4 Students know how to safely conduct an original scientific investigation using the appropriate tools and technology.
2.4.2	**Science: Nature of Science** N.12.A.4 Students know how to safely conduct an original scientific investigation using the appropriate tools and technology. **English Language Arts: Speaking and Listening Standards** SL.9-10.4 Present information, findings, and supporting evidence, conveying a clear and distinct perspective, such that listeners can follow the line of reasoning, alternative or opposing perspectives are addressed, and the organization, development, substance, and style are appropriate to purpose, audience, and a range of formal and informal tasks.
2.4.3	**Science: Nature of Science** N.12.A.4 Students know how to safely conduct an original scientific investigation using the appropriate tools and technology.

2.4.4	**English Language Arts: Writing Standards for Literacy in Science and Technical Subjects**	
	WHST.11-12.7	Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation.
	WHST.11-12.8	Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the usefulness of each source in answering the research question; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and following a standard format for citation.

CONTENT STANDARD 3.0: EVALUATING ENVIRONMENTAL QUALITY

Performance Indicators	Common Core State Standards and Nevada Science Standards
3.1.3	**English Language Arts: Reading Standards for Literacy in Science and Technical Subjects** RST.11-12.7 Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem.
3.1.4	**Science: Earth and Space** E.12.A.3 Students understand the role of the atmosphere in Earth's greenhouse effect. **English Language Arts: Speaking and Listening Standards** SL.11-12.4 Present information, findings, and supporting evidence, conveying a clear and distinct perspective, such that listeners can follow the line of reasoning, alternative or opposing perspectives are addressed, and the organization, development, substance, and style are appropriate to purpose, audience, and a range of formal and informal tasks.
3.1.5	**Science: Earth and Space** E.12.A.1 Students know the Sun is the major source of Earth's energy, and provides the energy driving Earth's weather and climate.
3.1.6	**Science: Nature of Science** N.12.A.5 Students know models and modeling can be used to identify and predict cause-effect relationships. **English Language Arts: Writing Standards for Literacy in Science and Technical Subjects** WHST.11-12.8 Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the specific task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation
3.1.7	**English Language Arts: Reading Standards for Literacy in Science and Technical Subjects** RST.11-12.9 Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible..
3.1.8	**Science: Earth and Space** E.12.A.2 Students know the composition of Earth's atmosphere has changed in the past and is changing today. **English Language Arts: Writing Standards for Literacy in Science and Technical Subjects** WHST.11-12.8 Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the specific task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation **English Language Arts: Reading Standards for Literacy in Science and Technical Subjects** RST.11-12.9 Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.
3.1.10	**English Language Arts: Reading Standards for Literacy in Science and Technical Subjects** RST.11-12.9 Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.
3.2.3	**English Language Arts: Speaking and Listening Standards** SL.11-12.2 Integrate multiple sources of information presented in diverse formats and media (e.g., visually, quantitatively, orally) in order to make informed decisions and solve problems, evaluating the credibility and accuracy of each source and noting any discrepancies among the data.

3.2.4	**English Language Arts: Reading Standards for Literacy in Science and Technical Subjects** RST.11-12.9 Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.
3.2.5	**English Language Arts: Reading Standards for Literacy in Science and Technical Subjects** RST.11-12.9 Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.
3.2.6	**English Language Arts: Reading Standards for Literacy in Science and Technical Subjects** RST.11-12.9 Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.
3.2.8	**English Language Arts: Reading Standards for Literacy in Science and Technical Subjects** RST.11-12.9 Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.
3.3.1	**Science: Earth and Space** E.12.C.5 Students know soil, derived from weathered rocks and decomposed organic material, is found in layers. **English Language Arts: Reading Standards for Literacy in Science and Technical Subjects** RST.11-12.9 Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.
3.3.2	**Science: Earth and Space** E.12.C.1 Students know how successive rock strata and fossils can be used to confirm the age, history, and changing life forms of the Earth, including how this evidence is affected by the folding, breaking, and uplifting of layers. E.12.C.5 Students know soil, derived from weathered rocks and decomposed organic material, is found in layers.

CONTENT STANDARD 4.0: EXPLORING CONCEPTS OF SUSTAINABLE USE

Performance Indicators	Common Core State Standards and Nevada Science Standards
4.2.2	**Science: Earth and Space** E.12.C.5 Students know soil, derived from weathered rocks and decomposed organic material, is found in layers.
4.2.3	**English Language Arts: Reading Standards for Literacy in Science and Technical Subjects** RST.11-12.9 Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.
4.3.1	**Science: Earth and Space** E.12.C.4 Students know processes of obtaining, using, and recycling of renewable and non-renewable resources.
4.3.2	**Science: Earth and Space** E.12.C.4 Students know processes of obtaining, using, and recycling of renewable and non-renewable resources.
4.3.4	**Science: Earth and Space** E.12.C.4 Students know processes of obtaining, using, and recycling of renewable and non-renewable resources. **English Language Arts: Reading Standards for Literacy in Science and Technical Subjects** RST.11-12.9 Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.
4.4.3	**English Language Arts: Writing Standards for Literacy in Science and Technical Subjects** WHST.11-12.7 Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation. **English Language Arts: Reading Standards for Literacy in Science and Technical Subjects** RST.11-12.9 Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.
4.4.4	**English Language Arts: Writing Standards for Literacy in Science and Technical Subjects** WHST.11-12.4 Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audienceWHST.11-12.9 Draw evidence from informational texts to support analysis, reflection, and research. **English Language Arts: Reading Standards for Literacy in Science and Technical Subjects** RST.11-12.9 Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.
4.4.5	**English Language Arts: Writing Standards for Literacy in Science and Technical Subjects** WHST.11-12.4 Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience
4.5.1	**English Language Arts: Writing Standards for Literacy in Science and Technical Subjects** WHST.11-12.4 Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience **English Language Arts: Reading Standards for Literacy in Science and Technical Subjects** RST.11-12.9 Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.

CONTENT STANDARD 5.0: USING GIS AND GPS

Performance Indicators	Common Core State Standards and Nevada Science Standards
5.1.1	**English Language Arts: Language Standards** L.11-12.6 Acquire and use accurately general academic and domain-specific words and phrases, sufficient for reading, writing, speaking, and listening at the college and career readiness level; demonstrate independence in gathering vocabulary knowledge when considering a word or phrase important to comprehension or expression. **English Language Arts: Writing Standards for Literacy in Science and Technical Subjects** WHST.11-12.4 Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. **English Language Arts: Reading Standards for Literacy in Science and Technical Subjects** RST.11-12.3 Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks; analyze the specific results based on explanations in the text.
5.1.2	**Science: Nature of Science** N.12.A.4 Students know how to safely conduct an original scientific investigation using the appropriate tools and technology
5.1.3	**English Language Arts: Language Standards** L.11-12.6 Acquire and use accurately general academic and domain-specific words and phrases, sufficient for reading, writing, speaking, and listening at the college and career readiness level; demonstrate independence in gathering vocabulary knowledge when considering a word or phrase important to comprehension or expression. **English Language Arts: Writing Standards for Literacy in Science and Technical Subjects** WHST.11-12.4 Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. **English Language Arts: Reading Standards for Literacy in Science and Technical Subjects** RST.11-12.3 Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks; analyze the specific results based on explanations in the text.
5.2.1	**Science: Nature of Science** N.12.A.1 Students know tables, charts, illustrations and graphs can be used in making arguments and claims in oral and written presentations. N.12.A.6 Students know organizational schema can be used to represent and describe relationships of sets.
5.2.2	**Science: Nature of Science** N.12.A.1 Students know tables, charts, illustrations and graphs can be used in making arguments and claims in oral and written presentations. N.12.A.6 Students know organizational schema can be used to represent and describe relationships of sets.
5.2.3	**Science: Nature of Science** N.12.A.1 Students know tables, charts, illustrations and graphs can be used in making arguments and claims in oral and written presentations. N.12.A.6 Students know organizational schema can be used to represent and describe relationships of sets.

5.3.1	**English Language Arts: Language Standards** L.11-12.6 Acquire and use accurately general academic and domain-specific words and phrases, sufficient for reading, writing, speaking, and listening at the college and career readiness level; demonstrate independence in gathering vocabulary knowledge when considering a word or phrase important to comprehension or expression. **English Language Arts: Writing Standards for Literacy in Science and Technical Subjects** WHST.11-12.4 Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. **English Language Arts: Reading Standards for Literacy in Science and Technical Subjects** RST.11-12.3 Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks; analyze the specific results based on explanations in the text.
5.3.2	**Science: Nature of Science** N.12.A.1 Students know tables, charts, illustrations and graphs can be used in making arguments and claims in oral and written presentations. N.12.A.6 Students know organizational schema can be used to represent and describe relationships of sets. **English Language Arts: Reading Standards for Literacy in Science and Technical Subjects** RST.11-12.9 Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.

CONTENT STANDARD 6.0: EXPLORE ENERGY SOURCES

Performance Indicators	Common Core State Standards and Nevada Science Standards
6.1.2	**Science: Earth and Space** E.12.C.4 Students know processes of obtaining, using, and recycling of renewable and non-renewable resources. **Science: Physical Science** P.12.C.6 Students know electricity is transferred from generating sources for consumption and practical uses. **English Language Arts: Reading Standards for Literacy in Science and Technical Subjects** RST.11-12.7 Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem. RST.11-12.9 Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible. **English Language Arts: Writing Standards for Literacy in Science and Technical Subjects** WHST.11-12.8 Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the specific task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation **English Language Arts: Speaking and Listening Standards** SL.11-12.1 Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grades 11–12 topics, texts, and issues, building on others' ideas and expressing their own clearly and persuasively.
6.1.3	**Science: Nature of Science** N.12.B.1 Students know science, technology, and society influenced one another in both positive and negative ways. N.12.B.2 Students know consumption patterns, conservation efforts, and cultural or social practices in countries have varying environmental impacts. **English Language Arts: Reading Standards for Literacy in Science and Technical Subjects** RST.11-12.9 Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.
6.1.4	**Science: Nature of Science** N.12.B.2 Students know consumption patterns, conservation efforts, and cultural or social practices in countries have varying environmental impacts.

6.2.2	**Science: Earth and Space** E.12.C.4 Students know processes of obtaining, using, and recycling of renewable and non-renewable resources. **English Language Arts: Reading Standards for Literacy in Science and Technical Subjects** RST.11-12.7 Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem. RST.11-12.9 Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible. **English Language Arts: Writing Standards for Literacy in Science and Technical Subjects** WHST.11-12.8 Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the specific task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation **English Language Arts: Speaking and Listening Standards** SL.11-12.1 Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grades 11–12 topics, texts, and issues, building on others' ideas and expressing their own clearly and persuasively.
6.2.3	**Science: Nature of Science** N.12.B.1 Students know science, technology, and society influenced one another in both positive and negative ways. N.12.B.2 Students know consumption patterns, conservation efforts, and cultural or social practices in countries have varying environmental impacts. **English Language Arts: Reading Standards for Literacy in Science and Technical Subjects** RST.11-12.9 Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.
6.2.4	**Science: Physical Science** P.12.C.4 Students know characteristics, applications and impacts of radioactivity.
6.2.5	**Science: Physical Science** P.12.C.3 Students know nuclear reactions convert a relatively small amount of material into a large amount of energy. **English Language Arts: Writing Standards for Literacy in Science and Technical Subjects** WHST.11-12.4 Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.

CONTENT STANDARD 7.0: HYDROLOGY AND HYDROGEOLOGY

Performance Indicators	Common Core State Standards and Nevada Science Standards
7.1.2	**English Language Arts: Speaking and Listening Standards** SL.11-12.1a Come to discussions prepared, having read and researched material under study; explicitly draw on that preparation by referring to evidence from texts and other research on the topic or issue to stimulate a thoughtful, well reasoned exchange of ideas.
7.1.3	**Science: Physical Science** P.12.B.1 Students know laws of motion can be used to determine the effects of forces on the motion of objects.
7.2.1	**Science: Earth and Space** E.12.C.3 Students know elements exist in fixed amounts and move through solid earth, oceans, atmosphere and living things as part of biogeochemical cycles. **English Language Arts: Reading Standards for Literacy in Science and Technical Subjects**. RST.11-12.7 Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem.
7.2.2	**Science: Physical Science** P.12.B.1 Students know laws of motion can be used to determine the effects of forces on the motion of objects.
7.2.5	**English Language Arts: Writing Standards for Literacy in Science and Technical Subjects** WHST.11-12.8 Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the specific task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation.

CONTENT STANDARD 8.0: ENVIRONMENTAL LAW AND PUBLIC POLICY

Performance Indicators	Common Core State Standards and Nevada Science Standards
8.1.1	**Science: Nature of Science** N.12.B.2 Students know consumption patterns, conservation efforts, and cultural or social practices in countries have varying environmental impacts.
8.1.2	**Science: Nature of Science** N.12.B.1 Students know science, technology, and society influenced one another in both positive and negative ways. N.12.B.2 Students know consumption patterns, conservation efforts, and cultural or social practices in countries have varying environmental impacts. N.12.B.3 Students know the influence of ethics on scientific enterprise. **English Language Arts: Reading Standards for Literacy in Science and Technical Subjects** RST.11-12.7 Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem. RST.11-12.9 Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible. **English Language Arts: Writing Standards for Literacy in Science and Technical Subjects** WHST.11-12.8 Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the specific task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation.
8.1.3	**Science: Nature of Science** N.12.B.2 Students know consumption patterns, conservation efforts, and cultural or social practices in countries have varying environmental impacts. N.12.B.3 Students know the influence of ethics on scientific enterprise. **English Language Arts: Reading Standards for Literacy in Science and Technical Subjects** RST.11-12.7 Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem. RST.11-12.9 Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible. **English Language Arts: Writing Standards for Literacy in Science and Technical Subjects** WHST.11-12.8 Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the specific task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation.

8.1.4	**Science: Nature of Science** N.12.B.2 Students know consumption patterns, conservation efforts, and cultural or social practices in countries have varying environmental impacts. N.12.B.3 Students know the influence of ethics on scientific enterprise. **English Language Arts: Reading Standards for Literacy in Science and Technical Subjects** RST.11-12.9 Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible. **English Language Arts: Writing Standards for Literacy in Science and Technical Subjects** WHST.11-12.8 Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the specific task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation.
8.1.5	**Science: Nature of Science** N.12.B.1 Students know science, technology, and society influenced one another in both positive and negative ways. N.12.B.2 Students know consumption patterns, conservation efforts, and cultural or social practices in countries have varying environmental impacts. N.12.B.3 Students know the influence of ethics on scientific enterprise. **English Language Arts: Reading Standards for Literacy in Science and Technical Subjects** RST.11-12.9 Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible. **English Language Arts: Writing Standards for Literacy in Science and Technical Subjects** WHST.11-12.8 Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the specific task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation.
8.2.1	**Science: Nature of Science** N.12.A.5 Students know models and modeling can be used to identify and predict cause-effect relationships. N.12.B.4 Students know scientific knowledge builds on previous information. **English Language Arts: Reading Standards for Literacy in Science and Technical Subjects** RST.11-12.2 Determine the central ideas or conclusions of a text; summarize complex concepts, processes, or information presented in a text by paraphrasing them in simpler but still accurate terms.
8.2.2	**Science: Life Science** L.12.D.4 Students know the extinction of species can be a natural process. **Science: Nature of Science** N.12.A.5 Students know models and modeling can be used to identify and predict cause-effect relationships. N.12.B.4 Students know scientific knowledge builds on previous information. **English Language Arts: Reading Standards for Literacy in Science and Technical Subjects** RST.11-12.2 Determine the central ideas or conclusions of a text; summarize complex concepts, processes, or information presented in a text by paraphrasing them in simpler but still accurate terms

8.2.3	**Science: Nature of Science** N.12.A.5 Students know models and modeling can be used to identify and predict cause-effect relationships. N.12.B.4 Students know scientific knowledge builds on previous information. **English Language Arts: Speaking and Listening Standards** SL.11-12.1a Come to discussions prepared, having read and researched material under study; explicitly draw on that preparation by referring to evidence from texts and other research on the topic or issue to stimulate a thoughtful, well reasoned exchange of ideas
8.2.4	**Science: Nature of Science** N.12.A.5 Students know models and modeling can be used to identify and predict cause-effect relationships. N.12.B.4 Students know scientific knowledge builds on previous information. **English Language Arts: Reading Standards for Literacy in Science and Technical Subjects** RST.11-12.2 Determine the central ideas or conclusions of a text; summarize complex concepts, processes, or information presented in a text by paraphrasing them in simpler but still accurate terms.
8.2.5	**Science: Nature of Science** N.12.A.5 Students know models and modeling can be used to identify and predict cause-effect relationships. N.12.B.4 Students know scientific knowledge builds on previous information. **English Language Arts: Reading Standards for Literacy in Science and Technical Subjects** RST.11-12.2 Determine the central ideas or conclusions of a text; summarize complex concepts, processes, or information presented in a text by paraphrasing them in simpler but still accurate terms.
8.2.6	**Science: Nature of Science** N.12.A.5 Students know models and modeling can be used to identify and predict cause-effect relationships. N.12.B.4 Students know scientific knowledge builds on previous information. **English Language Arts: Reading Standards for Literacy in Science and Technical Subjects** RST.11-12.2 Determine the central ideas or conclusions of a text; summarize complex concepts, processes, or information presented in a text by paraphrasing them in simpler but still accurate terms.
8.2.7	**Science: Nature of Science** N.12.A.5 Students know models and modeling can be used to identify and predict cause-effect relationships. N.12.B.4 Students know scientific knowledge builds on previous information. **English Language Arts: Speaking and Listening Standards** SL.11-12.1a Come to discussions prepared, having read and researched material under study; explicitly draw on that preparation by referring to evidence from texts and other research on the topic or issue to stimulate a thoughtful, well reasoned exchange of ideas
8.2.8	**English Language Arts: Reading Standards for Literacy in Science and Technical Subjects** RST.11-12.2 Determine the central ideas or conclusions of a text; summarize complex concepts, processes, or information presented in a text by paraphrasing them in simpler but still accurate terms.

CONTENT STANDARD 9.0: ASSESS ENVIRONMENTAL SITE MANAGEMENT

Performance Indicators	Common Core State Standards and Nevada Science Standards
9.1.2	**Science: Nature of Science** N.12.B.1 Students know science, technology, and society influenced one another in both positive and negative ways. **English Language Arts: Reading Standards for Literacy in Science and Technical Subjects** RST.11-12.9 Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible. **English Language Arts: Writing Standards for Literacy in Science and Technical Subjects** WHST.11-12.8 Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the specific task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation.
9.1.3	**English Language Arts: Writing Standards for Literacy in Science and Technical Subjects** WHST.11-12.8 Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the specific task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation. **English Language Arts: Speaking and Listening Standards** SL.11-12.4 Present information, findings, and supporting evidence, conveying a clear and distinct perspective, such that listeners can follow the line of reasoning, alternative or opposing perspectives are addressed, and the organization, development, substance, and style are appropriate to purpose, audience, and a range of formal and informal tasks. **English Language Arts: Reading Standards for Literacy in Science and Technical Subjects** RST.11-12.9 Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.
9.1.5	**English Language Arts: Writing Standards for Literacy in Science and Technical Subjects** WHST.11-12.8 Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the specific task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation. **English Language Arts: Speaking and Listening Standards** SL.11-12.4 Present information, findings, and supporting evidence, conveying a clear and distinct perspective, such that listeners can follow the line of reasoning, alternative or opposing perspectives are addressed, and the organization, development, substance, and style are appropriate to purpose, audience, and a range of formal and informal tasks. **English Language Arts: Reading Standards for Literacy in Science and Technical Subjects** RST.11-12.7 Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem.
9.2.1	**English Language Arts: Writing Standards for Literacy in Science and Technical Subjects** WHST.11-12.2 Write informative/explanatory texts, including the narration of historical events, scientific procedures/ experiments, or technical processes. **English Language Arts: Speaking and Listening Standards** SL.11-12.4 Present information, findings, and supporting evidence, conveying a clear and distinct perspective, such that listeners can follow the line of reasoning, alternative or opposing perspectives are addressed, and the organization, development, substance, and style are appropriate to purpose, audience, and a range of formal and informal tasks.

9.2.2	**Science: Nature of Science** N.12.B.2 Students know consumption patterns, conservation efforts, and cultural or social practices in countries have varying environmental impacts. **English Language Arts: Writing Standards for Literacy in Science and Technical Subjects** WHST.11-12.8 Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the specific task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation. **English Language Arts: Speaking and Listening Standards** SL.11-12.4 Present information, findings, and supporting evidence, conveying a clear and distinct perspective, such that listeners can follow the line of reasoning, alternative or opposing perspectives are addressed, and the organization, development, substance, and style are appropriate to purpose, audience, and a range of formal and informal tasks. **English Language Arts: Reading Standards for Literacy in Science and Technical Subjects** RST.11-12.9 Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.
9.2.3	**Science: Physical Science** P.12.C.2 Students know energy forms can be converted. P.12.C.6 Students know electricity is transferred from generating sources for consumption and practical uses. **English Language Arts: Reading Standards for Literacy in Science and Technical Subjects** RST.11-12.7 Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem. RST.11-12.9 Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible. **English Language Arts: Writing Standards for Literacy in Science and Technical Subjects** WHST.11-12.8 Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the specific task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation.
9.3.2	**English Language Arts: Writing Standards for Literacy in Science and Technical Subjects** WHST.11-12.8 Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the specific task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation. **English Language Arts: Speaking and Listening Standards** SL.11-12.4 Present information, findings, and supporting evidence, conveying a clear and distinct perspective, such that listeners can follow the line of reasoning, alternative or opposing perspectives are addressed, and the organization, development, substance, and style are appropriate to purpose, audience, and a range of formal and informal tasks. **English Language Arts: Reading Standards for Literacy in Science and Technical Subjects** RST.11-12.9 Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.

9.3.3	**English Language Arts: Reading Standards for Literacy in Science and Technical Subjects** RST.11-12.9 Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible. **English Language Arts: Writing Standards for Literacy in Science and Technical Subjects** WHST.11-12.8 Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the specific task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation.
9.4.2	**Science: Nature of Science** N.12.B.2 Students know consumption patterns, conservation efforts, and cultural or social practices in countries have varying environmental impacts. **English Language Arts: Reading Standards for Literacy in Science and Technical Subjects** RST.11-12.7 Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem. RST.11-12.9 Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible. **English Language Arts: Writing Standards for Literacy in Science and Technical Subjects** WHST.11-12.8 Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the specific task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation.
9.4.4	**Science: Physical Science** P.12.A.3 Students know identifiable properties can be used to separate mixtures.
9.5.2	**Science: Nature of Science** N.12.B.1 Students know science, technology, and society influenced one another in both positive and negative ways. **English Language Arts: Reading Standards for Literacy in Science and Technical Subjects** RST.11-12.7 Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem.
9.6.1	**English Language Arts: Reading Standards for Literacy in Science and Technical Subjects** RST.11-12.2 Determine the central ideas or conclusions of a text; summarize complex concepts, processes, or information presented in a text by paraphrasing them in simpler but still accurate terms. RST.11-12.9 Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.
9.6.3	**English Language Arts: Writing Standards for Literacy in Science and Technical Subjects** WHST.11-12.2 Write informative/explanatory texts, including the narration of historical events, scientific procedures/ experiments, or technical processes. WHST.11-12.2d Use precise language, domain-specific vocabulary and techniques such as metaphor, simile, and analogy to manage the complexity of the topic; convey a knowledgeable stance in a style that responds to the discipline and context as well as to the expertise of likely readers. **English Language Arts: Speaking and Listening Standards** SL.11-12.4 Present information, findings, and supporting evidence, conveying a clear and distinct perspective, such that listeners can follow the line of reasoning, alternative or opposing perspectives are addressed, and the organization, development, substance, and style are appropriate to purpose, audience, and a range of formal and informal tasks.

CONTENT STANDARD 10.0: EXPLORE CAREER OPPORTUNITIES IN ENVIRONMENTAL SYSTEMS

Performance Indicators	Common Core State Standards and Nevada Science Standards
10.1.2	**English Language Arts: Writing Standards for Literacy in Science and Technical Subjects** WHST.11-12.7 Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation.

CONTENT STANDARD 11.0: PARTICIPATE IN LEADERSHIP TRAINING THROUGH MEMBERSHIP IN FFA

Performance Indicators	Common Core State Standards and Nevada Science Standards
11.1.2	**English Language Arts: Speaking and Listening Standards** SL.11-12.4 Present information, findings, and supporting evidence, conveying a clear and distinct perspective, such that listeners can follow the line of reasoning, alternative or opposing perspectives are addressed, and the organization, development, substance, and style are appropriate to purpose, audience, and a range of formal and informal tasks
11.2.4	**English Language Arts: Speaking and Listening Standards** SL.11-12.1b Work with peers to promote civil, democratic discussions and decision-making, set clear goals and deadlines, and establish individual roles as needed.
11.2.5	**English Language Arts: Speaking and Listening Standards** SL.11-12.1b Work with peers to promote civil, democratic discussions and decision-making, set clear goals and deadlines, and establish individual roles as needed.
11.3.4	**English Language Arts: Speaking and Listening Standards** SL.11-12.1b Work with peers to promote civil, democratic discussions and decision-making, set clear goals and deadlines, and establish individual roles as needed.

CONTENT STANDARD 12.0: DESCRIBE THE RELATIONSHIP BETWEEN A SUPERVISED AGRICULTURAL EXPERIENCE (SAE) AND PREPARATION OF STUDENTS FOR A CAREER IN AGRICULTURE

Performance Indicators	Common Core State Standards and Nevada Science Standards
12.1.3	**English Language Arts: Reading Standards for Literacy in Science and Technical Subjects** RST.11-12.4 Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 11–12 texts and topics.
12.2.1	**English Language Arts: Language Standards** L.11-12.2b Spell correctly.
12.2.2	**English Language Arts: Writing Standards for Literacy in Science and Technical Subjects** WHST.11-12.7 Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation. **English Language Arts: Reading Standards for Literacy in Science and Technical Subjects** RST.11-12.7 Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem. RST.11-12.9 Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.

ALIGNMENT OF ENVIRONMENTAL MANAGEMENT STANDARDS AND THE COMMON CORE MATHEMATICAL PRACTICES

Common Core Mathematical Practices	Environmental Management Performance Indicators
1. Make sense of problems and persevere in solving them.	2.1.1; 2.2.2; 2.4.4 3.1.9; 3.2.7; 3.3.4, 3.3.10 5.2.1-5.2.3; 9.6.4; 12.1.3; 12.2.1
2. Reason abstractly and quantitatively.	1.1.2, 1.1.3 2.1.2; 2.2.2, 2.2.3, 2.3.2; 2.4.4 3.3.5; 4.2.2; 5.1.2; 5.2.1-5.2.3 7.2.2; 9.2.3; 12.1.3; 12.2.1
3. Construct viable arguments and critique the reasoning of others.	1.1.3; 2.1.2; 2.2.2, 2.2.3 3.1.9; 3.2.7; 3.3.10; 4.2.2
4. Model with mathematics.	1.1.3; 1.3.2; 2.3.1-2.3.3 3.1.6, 3.1.9; 3.2.7; 3.3.10 5.1.2; 5.2.1-5.2.3 7.1.2; 7.2.2; 9.6.4; 12.1.3; 12.2.1
5. Use appropriate tools strategically.	2.1.3; 2.4.4 3.1.9; 3.2.7; 3.3.4, 3.3.10 5.1.2; 5.2.1-5.2.3 9.6.4; 12.1.3; 12.2.1
6. Attend to precision.	2.1.3; 2.3.3; 2.4.3, 2.4.4; 3.1.9; 3.2.7; 3.3.4, 3.3.10 5.1.2; 5.2.1-5.2.3; 7.2.2; 9.6.4; 12.1.3; 12.2.1
7. Look for and make use of structure.	1.1.2; 2.1.2; 2.3.2, 2.3.3; 4.2.2
8. Look for and express regularity in repeated reasoning.	4.2.2

CROSSWALKS OF ENVIRONMENTAL MANAGEMENT STANDARDS AND THE COMMON CAREER TECHNICAL CORE

Agriculture, Food & Natural Resources Career Cluster™

Agriculture, Food & Natural Resources Career Cluster™ (AG)	Performance Indicators
1. Analyze how issues, trends, technologies and public policies impact systems in the Agriculture, Food & Natural Resources Career Cluster™.	1.1.3, 1.1.6, 1.1.7 1.3.1-1.3.5; 2.4.1-2.4.5 3.2.4, 3.2.8; 3.3.8 5.1.1-5.1.3; 5.2.1-5.2.3 5.3.1-5.3.3; 8.1.1-8.1.5
2. Evaluate the nature and scope of the Agriculture, Food & Natural Resources Career Cluster™ and the role of agriculture, food and natural resources (AFNR) in society and the economy.	3.1.10; 3.2.8; 3.3.7 4.1.2, 4.1.3; 4.3.2; 7.1.1
3. Examine and summarize the importance of health, safety and environmental management systems in AFNR businesses.	2.4.1-2.4.5; 3.2.5, 3.2.8 4.1.2, 4.1.3; 4.2.1-4.2.3 9.1.1-9.5.4
4. Demonstrate stewardship of natural resources in AFNR activities.	1.1.5-1.1.7; 2.4.3 3.1.9, 3.1.10; 3.2.7 3.3.7-3.3.9; 4.1.1, 4.1.3 4.3.4, 4.3.5; 7.2.5; 7.3.2
5. Describe career opportunities and means to achieve those opportunities in each of the Agriculture, Food & Natural Resources Career Pathways.	1.3.5; 10.1.1-10.1.3
6. Analyze the interaction among AFNR systems in the production, processing and management of food, fiber and fuel and the sustainable use of natural resources.	3.1.10; 3.2.8; 4.2.1-4.2.3 6.1.1-6.1.4

Environmental Service Systems Career Pathway (AG-ENV)	Performance Indicators
1. Use analytical procedures and instruments to manage environmental service systems.	1.3.5; 2.4.3, 2.4.5; 3.1.9; 3.2.7; 3.3.8-3.1.10 5.1.1-5.1.3; 5.2.1-5.2.3, 5.3.1-5.3.3
2. Evaluate the impact of public policies and regulations on environmental service system operations.	1.3.5; 2.4.3; 4.3.4 8.1.1-8.2.8
3. Develop proposed solutions to environmental issues, problems and applications using scientific principles of meteorology, soil science, hydrology, microbiology, chemistry and ecology.	1.3.2-1.3.5; 7.2.5 9.1.1-9.6.4
4. Demonstrate the operation of environmental service systems (e.g., pollution control, water treatment, wastewater treatment, solid waste management and energy conservation).	4.2.4; 6.2.1-6.2.5 9.1.1-9.6.4

5. Use tools, equipment, machinery and technology common to tasks in environmental service systems.	2.1.1-2.1.3; 2.3.1-2.3.3 2.4.1-2.4.5; 3.1.9 3.2.7; 3.3.7, 3.3.10 4.4.3; 5.1.1-5.1.3 5.2.1-5.2.3; 5.3.1-5.3.3